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# FEE TRANSMITTAL for FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500

## Complete if Known

Application Number	09/910,650
Filing Date	July 20, 2001
First Named Inventor	Hlasny
Examiner Name	Chea, Phillip J.
Art Unit	2153
Attorney Docket No.	7146.0110/SLA1005

## METHOD OF PAYMENT (check all that apply)

- ☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify) : \_\_\_\_\_
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## FEE CALCULATION

### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

### 2. EXCESS CLAIM FEES

Fee Description	Small Entity Fee (\$)	Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
<b>Total Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
_____ -20 or HP= _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
<b>Indep. Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
_____ - 3 or HP= _____ x _____ = _____		
HP = highest number of independent claims paid for, if greater than 3.		

### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

**Total Sheets** **Extra Sheets** **Number of each additional 50 or fraction thereof** **Fee (\$)** **Fee Paid (\$)**

\_\_\_\_\_ - 100 = \_\_\_\_\_ / 50 = \_\_\_\_\_ (round up to a whole number) x \_\_\_\_\_ = \_\_\_\_\_

### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount) \_\_\_\_\_

Other (e.g., late filing surcharge): Appeal Brief \$500

## SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	54,405	Telephone	503-227-5631
Name (Print/Type)	Kurt Rohlf			Date	

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/910,650	
	Filing Date	July 20, 2001	
	First Named Inventor	Hlasny	
	Art Unit	2153	
	Examiner Name	Chea, Phillip J.	
Total Number of Pages in This Submission	23	Attorney Docket Number	7146.0110/SLA1005

**ENCLOSURES (check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) ____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Return Post Card
<b>Remarks</b>  The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Deposit Account No. 03-1550.		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm	Chernoff Vilhauer McClung & Stenzel, LLP 1600 ODS Tower 601 S.W. Second Avenue Portland, OR 97204		
Signature			
Printed Name	Kurt Rohlf		
Date	October 30, 2006	Reg. No.	54,405

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I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	Kurt Rohlf	Date	October 30, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant : Hlasny                      Group Art Unit : 2153  
Serial No. : 09/910,650              Examiner : Chea, Phillip J.  
Filed : July 20, 2001              Attorney Docket : KLR/7146.0110/SLA 1005  
Customer No. : 55648              Confirmation No. : 2629  
Title : OBJECT SEARCH AND RETRIEVAL SYSTEM FOR AN AD HOC  
DATA SERVICE

**APPELLANT'S BRIEF**

Chernoff, Vilhauer, McClung, and Stenzel, L.L.P.  
1600 ODS Tower  
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October 30, 2006

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Dear Sir:

**BACKGROUND**

This brief is in furtherance of the Notice of Appeal, filed in this case on August 28, 2006.

The fees required under 37. C.F.R. § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

11/02/2006 SSESHE1 00000055 09910650

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This brief comprises these subjects under the headings, and in the order, set forth below:

- I. Real Party in Interest
- II. Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds for Rejection to be Reviewed on Appeal
- VII. Argument
- VIII. Conclusion
- IX. Claims Appendix
- X. Evidence Appendix
- XI. Related Proceedings Appendix

The final page of this brief bears the practitioner's signature.

### **REAL PARTY IN INTEREST**

The real party in interest in this appeal is Sharp Laboratories of America, Inc., assignee of the captioned application.

### **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

## **STATUS OF CLAIMS**

### **A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION**

There are 26 claims currently pending in the application.

### **B. STATUS OF ALL CLAIMS**

Claims canceled: None

Claims withdrawn: None

Claims pending: 1-26

Claims allowed: None

Claims objected to: None

Claims rejected: 1-26

### **C. CLAIMS ON APPEAL**

Claims 1-26 are on appeal.

A copy of the claims on appeal is set forth in the Claims Appendix to this Brief.

## **STATUS OF AMENDMENTS**

No amendment was filed after final rejection.

## **SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed subject matter is generally directed to a method of transferring an object from a source device to a destination device over an ad hoc network comprising at least one piconet. *See* Specification at p. 3 lines 10-12 and at p. 5 lines 1-16. In a first embodiment, as claimed in independent claim 1, the method includes the steps of: (1) discovering a plurality of data processing devices communicating with a destination device over a communication channel of the ad hoc network (Specification at p. 6 lines 11-16); (2) identifying at least one of those

discovered data processing devices as one that facilitates a remotely directed search for a data object (Specification at p. 6 line 7 to p. 7 line 2); (3) using an identified data processing device to search for the object on the plurality of data processing devices discovered in step (1), using a communication channel of the ad hoc network (Specification at p. 7 lines 3-20); (4) selecting as a source device a discovered data processing device that the search indicates as a location of the object; (Specification at p.8 lines 14-24); and (5) transferring the object from the source device to the destination device over the communication channel of the ad hoc network. (Specification at p. 9 lines 10-17). Each of the foregoing steps is accomplished without using a central server. (See specification at p. 2 lines 6-8.)

In a second embodiment, as claimed in claim 17, a method may include the steps of (1) transmitting a page message on a communication channel of an ad hoc network; (2) including an address of a device responding to the page message in a device list; (3) transmitting an object search and transfer service query to a device identified in the device list; (4) including an address of a data processing device responding to the object search and transfer service query in a list of devices facilitating a search and transfer of a data object; (5) transmitting a search request including a user-specified search parameter to a data processing device identified in the list of devices facilitating a search for and transfer of a data object, where the identified data processing device is capable of searching for the object on responding devices over a communication channel of the ad hoc network; (6) receiving a response to the search request from a data processing device identifying a data object having a relation to the search parameter; (7) transmitting a transfer availability query to a device that is a location of the object identified by a user (Specification at p. 8 lines 24-26); (8) receiving a response to the transfer query including a measure of availability of a device to transfer the object (*Id.*) ; (9) selecting as a source device a responding device maximizing the measure of availability (Specification at p. 8 lines 26-29);

(10) transmitting to the source device a request to transfer the object; and (11) receiving the destination device data of said object transferred over said communication channel. Except as otherwise noted, support for the foregoing steps is found in the specification at the pages and lines cited in the preceding paragraph. Again, all of the foregoing steps are performed without a centralized server.

#### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The grounds of rejection presented for review are: (1) whether claims 1 and 3-12 are unpatentable under 35 U.S.C. §102(b) as being anticipated by Traversat et al., U.S. Patent Pub. No. 2002/0147771 (hereinafter “Traversat”); (2) whether claims 2 and 17-22, 25, and 26 are unpatentable under 35 U.S.C. §103(a) over the combination of Traversat in view of the Bluetooth Specification cited in applicant’s IDS filed 7/31/03; (3) whether claims 13 and 14 are unpatentable under 35 U.S.C. §103(a) over the combination of Traversat in view of Kazaa Media Desktop as cited in the Examiner’s Office Action dated 10/15/04 as reference “V” (hereinafter Kazaa); whether claims 15 and 16 are unpatentable under 35 U.S.C. §103(a) over the combination of Traversat, Kazaa, and Fielding et al., HTTP/1.1 RFC 2616 cited in the Examiner’s Office Action dated 10/15/04 as reference “U” (hereinafter Fielding); and whether claims 23 and 24 are unpatentable under 35 U.S.C. §103(a) over Traversat in view of the Bluetooth Specification, and in further view of Kazaa.

## **ARGUMENT**

### **GROUP I (Claims 1-16)**

#### **REJECTION UNDER 35 U.S.C. §102(b) IN VIEW OF TRAVERSAT**

The Examiner rejected claims 1 and 3-12 as being anticipated by Traversat. At the outset, independent claim 1, from which claims 2-12 respectively depend, includes limitations each specifying steps that are performed over a “communication channel of [an] ad hoc network,” where the ad-hoc network includes “at least one piconet.” The specification defines a piconet as “a point to multipoint topology over [a] communication channel shared by all devices” using a common frequency-hopping pattern. *See* Specification at p. 1 line 24 to p. 2 line 3 and at p. 5 lines 4-11. Traversat does not disclose, nor has the Examiner even alleged that Traversat discloses, any operations performed over a communications channel of a piconet. Therefore, the Examiner’s rejection of claims 1 and 3-12 under 35 U.S.C. § 102(b), which requires that a single reference disclose all claimed limitations, is improper.

The Examiner’s rejection is improper for another reason, as well. Independent claim 1 includes the limitations of (1) “discovering a plurality of data processing devices communicating with said destination device;” (2) “identifying a discovered data processing device that facilitates a remotely directed search for a data object;” and (3) “using an identified data processing device to search for said object on discovered said plurality of data processing devices over a communication channel of said ad hoc network.” These limitations are not disclosed by Traversat.

Traversat discloses a peer-to-peer (P2P) computing network that includes a core layer 120, a services layer 140, and an application layer 150. The P2P network allows peers (users) to, among other things, share files over the network, such as music files. To that end, Traversat specifically discloses that the P2P network may include a music request service within the



services layer 140. An application may therefore provide a user interface that accesses the music request service within the network. Traversat clearly indicates that that searching, indexing, and file sharing components of this system are included within the basic P2P system provided *to each peer* in the system. *See, e.g.* Traversat at par. 88-89. Therefore, each computing device on the P2P system would include, as part of its basic services layer, the indexing and searching capabilities that permit an application running on the device to request a file from peers, and permit the device to respond to requests for files from other peers by searching itself for the requested file and responding accordingly. In the system of Traversat, a user wishing to search other peers' devices for a music file initiates the request at it's device, by sending a request through the music request service, which is commonly shared among peers, simultaneously to other connected peers, each of which responds by searching their own respective devices and each sending a response back to the request originator. *See* Traversat at par. 0096 ("A peer submits multiple requests for music files and then checks back later to see if [any files are found by] the music request *service* in the peer group" which "operates *over* a peer-to-peer platform-based P2P network." (emphasis added).

In contrast, independent claim 1 requires that a first device identify separate network device and use that device to perform the search on a plurality of other devices in the network. In other words, claim 1 requires that the search be performed on a plurality of potential source devices by an intermediating device. Traversat fails to disclose this claimed feature, instead having a requesting peer send a request to each other peer in the network, through a service accessed on that peer's computing device, where the other peers each merely search their own respective computing devices and respond to the requester.

Dependent claims 10 and 11 include additional limitations that are not disclosed by Traversat. The Examiner's rejection of these claims is improper for the same reasons specifically discussed with respect to the Group II claims 17 and 22, below.

Therefore, independent claim 1, as well as claims 3-12 each patentably distinguish over Traversat, and the Examiner's rejection of these claims should be overturned.

**REJECTION UNDER 35 U.S.C. §103(a) IN VIEW OF THE RESPECTIVE COMBINATIONS OF TRAVERSAT AND BLUETOOTH SPECIFICATION. TRAVERSAT AND KAZAA, AND TRAVERSAT, KAZAA, AND FIELDING**

The Examiner rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of the Bluetooth specification. The Examiner rejected claims 13 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of Kazaa. The Examiner rejected claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of Kazaa, and in further view of Fielding. Each of these rejections is premised upon Traversat disclosing all the limitations included in independent claim 1. Independent claim 1 patentably distinguishes over Traversat for the reasons discussed in the preceding section, thus the Examiner's respective rejections of claims 2 and 13-16 are also improper because the respectively recited combinations of Traversat and Kazaa, and Traversat, Kazaa, and Fielding, therefore fail to disclose all recited limitations in claims 13-16.

## **GROUP II (Claims 17-26)**

### **REJECTION UNDER 35 U.S.C. §103(a) IN VIEW OF THE COMBINATION OF TRAVERSAT AND THE BLUETOOTH SPECIFICATION**

The Examiner rejected claims 17-22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of the Bluetooth specification. The Examiner rejected claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Traversat in view of the Bluetooth Specification, and in further view of Kazaa. The applicant's arguments with respect to the Examiner's anticipation rejection of claims of Group I are also applicable to the claims of Group II, except for the applicant's preliminary argument that Traversat fails to disclose communicating over a channel of a piconet, because the Bluetooth specification discloses that limitation.

Moreover, independent claim 17, from which claims 18-26 depend, includes the limitations of (1) "transmitting a transfer availability query to a device that is a location of said object identified by a user;" (2) "receiving a response to said transfer query including a measure of availability of a device to transfer said object;" and (3) "selecting as said source device a responding device maximizing said measure of availability." The Examiner contends that these limitations are disclosed at par. 96 and 99 of Traversat. The Examiner is incorrect, as these paragraphs merely disclose that when a requested file cannot be found, the music request service indicates that it could not be found and that the user may try again later *in case additional peers come on line*. In contrast, claim 17 requires that a transfer availability query be sent to "a device that is a location of the object identified by a user" and that the response by the device *actually having the object* include a measure of availability. If, as the Examiner contends, the measure of availability is the general assertion that some object could not be found, then there could not

have been a request to an object having that requested object, nor a response from a device having the requested object, nor even a transfer of that unavailable object.

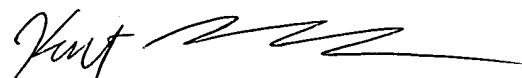
Also, dependent claim 22 includes the additional limitation that “said measure of availability included in said response to said transfer query comprises a measure of data transfer throughput.” The examiner contends that Traversat discloses this limitation at par. 0081. That paragraph states that the core layer 12 may include “peer monitoring [that] enables control of the behavior and activity of peers . . . and can be used to implement peer management functions including access control, priority setting, traffic metering, and bandwidth balancing.” Claim 22 requires the step of “receiving a response to said transfer query including a measure of availability of a device to transfer said object” where the measure of availability received in a response to a transfer inquiry is a measure of data transfer throughput.” The cited passages do not disclose this; a simple disclosure that the core layer of a P2P network monitors bandwidth among the peers is not remotely indicative of a specific limitation that a response to an individual transfer request include “a measure of data transfer throughput.”

For each of the foregoing reasons, the Examiner’s rejection of the claims of Group II was improper and should be reversed.

### **CONCLUSION**

The Examiner’s respective rejections of claims 1-63 should be reversed, and the claims should be found patentable.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kurt", followed by several horizontal strokes.

Kurt Rohlf  
Reg. No. 54,405  
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## **CLAIMS APPENDIX**

1. A method of transferring an object from a source device to a destination device over an ad hoc network comprising at least one piconet, said method comprising the steps of:

- (a) discovering a plurality of data processing devices communicating with said destination device in a manner free from using a central server over a communication channel of said ad hoc network;
- (b) identifying a discovered data processing device that facilitates a remotely directed search for a data object in a manner free from using a central server;
- (c) using an identified data processing device to search for said object on discovered said plurality of data processing devices over a communication channel of said ad hoc network wherein said identified data processing device is free from being a central server;
- (d) selecting a discovered data processing device that is a location of said object as said source device; and
- (e) transferring said object from said source device to said destination device over said communication channel.

2. The method of claim 1 wherein the step of discovering a data processing device communicating with said destination device over said communication channel comprises the steps of:

- (a) transmitting a paging message over said communication channel; and
- (b) including an address of a device responding to said paging message in a device list.

3. The method of claim 1 wherein the step of identifying a discovered data processing device that facilitates a remotely directed search for a data object comprises the steps of:

- (a) transmitting an object search and transfer service query to a discovered data processing device; and
- (b) including an address of data processing device responding to said object search and transfer query in a list of devices facilitating a remotely directed search for and transfer of a data object.

4. The method of claim 1 wherein the step of identifying a discovered data processing device that facilitates a remotely directed search for a data object comprises the steps of:

- (a) transmitting an object search and transfer service query to a discovered data processing device;
- (b) including an address of a data processing device responding to said object search and transfer service query in a list of devices facilitating a remotely directed search for and transfer of a data object, and
- (c) including in said list of devices facilitating a remotely directed search for and transfer of a data object an address of another device identified as a device facilitating a remotely directed search for and transfer of a data object in said response to said object search and transfer service query by said device responding to said query.

5. The method of claim 1 wherein the step of using an identified data processing device for said object comprises the steps of:

- (a) transmitting a search request including a user specified search parameter to a data processing device identified as facilitating a search for and transfer of a data object; and
- (b) receiving a response to said search request from a data processing device identifying a data object having a relation to said search parameter.

6. The method of claim 5 further comprising the step of displaying to a user an object identifier of said data object identified in said response.

7. The method of claim 5 wherein said response comprises an object name associated with a data object having a relation to said search parameter.

8. The method of claim 5 wherein said response includes a unique object identifier associated with a data object having a relation to said search parameter.

9. The method of claim 5 wherein said response comprises an address of another device on which said data object is located.

10. The method of claim 1 wherein the step of selecting a discovered data processing device that is a location of said object as said source device comprises the steps of:

- (a) transmitting a transfer availability query to a device that is a location of said object and that facilitates data object transfer;

- (b) receiving a response to said transfer availability query, said response including a measure of an availability of said device to transfer said object ; and
- (c) selecting as said source device a responding device optimizing said measure of availability.

11. The method of claim 10 wherein said measure of availability comprises a measure of data transfer throughput.

12. The method of claim 1 wherein the step of transferring said object from said source device to said destination device over said communication channel comprises the steps of:

- (a) determining an availability of said source device to transfer a data object;
- (b) transmitting to said source device a request to transfer said object; and
- (c) receiving said destination device data of said object transferred over said communication channel.

13. The method of claim 12 wherein the step of receiving at said destination device data of said object transferred over said communication channel comprises the steps of:

- (a) receiving a portion of said data of said object and an identifier of said portion of said data; and
- (b) preserving said identifier of said portion of said data

14. The method of claim 1 further comprising the steps of:

- (a) identifying a portion of said object not transferred to said destination device from said source device;



- (b) identifying a second source device having a second portion of said object that has not been transferred to said destination device; and
- (c) requesting transfer of said second portion of said object from said second source device to said destination device.

15. The method of claim 14 wherein the step of identifying a portion of said object not transferred to said destination device from said source device comprises the steps of:

- (a) including with data of said object a measure of quantity of data comprising said object; and
- (b) comparing a measure of said data received by said destination device to said measure of said quantity of data comprising said object.

16. The measure of claim 15 wherein the step of including with data of said object a measure of a quantity of data comprising said object comprises the step of including with an object a total number of bytes of data for an object comprises an ordered sequence of said bytes of data.

17. A method of transferring an object from a source device to a destination device over an ad hoc network comprising at least one piconet, said method comprising the steps of:

- (a) transmitting a page message on a communication channel of said ad hoc network, wherein said ad hoc network is free from including a central server;
- (b) including an address of a device responding to said page message in a device list;
- (c) transmitting an object search and transfer service query to a device identified in said device list;

- (d) including an address of a data processing device responding to said object search and transfer service query in a list of devices facilitating a search and transfer of a data object;
- (e) transmitting a search request including a user specified search parameter to a data processing device identified in said list of devices facilitating a search for and transfer of a data object, said identified data processing device capable of searching for said object on responding said devices over a communication channel of said ad hoc network;
- (f) receiving a response to said search request from a data processing device identifying a data object having a relation to said search parameter;
- (g) transmitting a transfer availability query to a device that is a location of said object identified by a user;
- (h) receiving a response to said transfer query including a measure of availability of a device to transfer said object;
- (i) selecting as said source device a responding device maximizing said measure of availability;
- (j) transmitting to said source device a request to transfer said object; and
- (k) receiving said destination device data of said object transferred over said communication channel.

18. The method of claim 17 further comprising the step of displaying to a user an object identifier of said data object identified in said response to said search request.

19. The method of claim 17 wherein said response to said search request comprises an object name associated with a data object having a relation to said search parameter.

20. The method of claim 17 wherein said response to said search request includes a unique object identifier associated with a data object having a relation to said parameter.

21. The method of claim 17 wherein said response to said search request comprises an address of another device on which said data object is located.

22. The method of claim 17 wherein said measure of availability included in said response to said transfer query comprises a measure of data transfer throughput.

23. The method of claim 17 wherein the step of receiving at said destination device data of said object transferred over said communication channel comprises the steps of:

- (a) receiving a portion of said data of said object and an identifier of said portion of said data; and
- (b) preserving said identifier of said portion of said data

24. The method of claim 17 further comprising the steps of:

- (a) identifying a portion of said object not transferred to said destination device from said source device;
- (b) identifying another source device having another portion of said object that has not been transferred to said destination device; and

- (c) requesting transfer of said another portion of said object from said another source device to said destination device.

25. The method of claim 24 wherein the step of identifying a portion of said object not transferred to said destination device from said source device comprises the steps of:

- (a) including with data of said object a measure of quantity of data comprising said object; and
- (b) comparing a measure of said data received by said destination device to said measure of said quantity of data comprising said object.

26. The method of claim 25 wherein the step of including with data of said object a measure of quantity of data comprising said object comprises the step of including with an object a total number of bytes of data for an object comprises an ordered sequence of said bytes of data.

**EVIDENCE APPENDIX:**

None.

**RELATED PROCEEDINGS APPENDIX:**

None.